

Amendments to the claims:

This listing of the claims will replace all prior versions and listings of the claims in the application:

Listing of Claims:

1. (Currently Amended) A method for melting glass comprising ~~the steps of~~:
providing a current conducting melting vessel within which glass can be melted;
providing at least two induction heating coils at selected locations proximate to the said melting vessel;
selectively supplying power to the said coils to thereby selectively energise the said coils; and
preventing or permitting the a mutual induction of current in a heating coil adjacent to an energised heating coil by selecting an on or off status of a switching element in power supply circuitry associated with the said a heating coil.
2. (Currently Amended) The method as claimed in claim 1 further comprising ~~the steps of~~:
when two or more adjacent coils are simultaneously energised during a heating operation, balancing the heating power delivered to respective zones associated with each adjacent coil, in the said vessel.
3. (Currently Amended) The method as claimed in claim 2 further comprising ~~the steps of~~:
during the said heating operation in which two or more adjacent coils are simultaneously energised, allowing the mutual induction of current in the said adjacent coils to occur.

4. (Currently Amended) The method as claimed in ~~any one of claims 1 to 3~~ claim 1 further comprising ~~the steps of~~:

selecting which of the said at least two induction coils is energised ~~at any instant~~ by selectively switching a switching element, located in power supply circuitry associated with a respective coil, on or off.

5. (Currently Amended) The method as claimed in ~~any one of claims 1 to 4~~ claim 1 further comprising ~~the steps of~~:

prior to a step of energising a selected coil, precharging a capacitor bank and subsequently utilising power stored in the said capacitor bank during the said precharging step, during an early stage of energising the said selected coil.

6. (Currently Amended) The method as claimed in ~~any one of claims 1 to 5~~ claim 1 further comprising the step of providing a 50 Hertz AC power supply for supplying power to the said at least two coils.

7. (Currently Amended) The method as claimed in ~~any one of claims 1 to 6~~ claim 1 wherein the said switching elements comprise at least one thyristor.

8. (Currently Amended) Apparatus An apparatus for melting glass via induction melting comprising:

a current conducting melting vessel;

at least two induction heating coils provided at selected locations proximate to the said melting vessel;

a plurality of power supply circuits each being associated with a respective one of the said heating coils and being arranged for selectively supplying power to a respective coil to thereby energise that respective coil; wherein

each power supply circuit includes a switching element arranged to prevent or permit the a mutual induction of current in a respective heating coil when an adjacent heating coil is energised according to a selected on or off status of the switching element.

9. (Currently Amended) The apparatus as claimed in claim 8 wherein:
each heating coil is arranged to provide a heating effect in a respective region of the melting vessel when the said coil is energised.

10. (Currently Amended) The apparatus as claimed in claim 8 ~~or claim 9~~ wherein the said switching element comprises at least one thyristor.

11. (Currently Amended) The apparatus as claimed in ~~any one of claims 8 to 10~~
claim 8 wherein:

the said melting vessel includes an input and a drain output and pour output arranged respectively for receiving glass frit and waste material, draining the contents of the said vessel during a draining operation and pouring a molten mixture of the said glass and waste material during a pour operation.

12. (Currently Amended) The apparatus as claimed in claim 11 further comprising:

a plurality of induction heating elements each arranged proximate to a respective one of the said inputs and drain and pour outputs and arranged to selectively melt a glass seal closing the input or output to thereby permit the addition of new glass and/or waste material and the outflow of molten material, respectively.

13. (Currently Amended) The apparatus as claimed in ~~any one of claims 8 to 12~~
claim 8 wherein:

each power control circuit includes a further switching element arranged to selectively charge a bank of capacitors in the said power control circuit during a precharge operation.

14. (Currently Amended) The apparatus as claimed in ~~any one of claims 9 to 13~~
claim 8 further comprising:

a 50 Hertz AC power supply for supplying power to the said heating coils.

15. (Currently Amended) A method for reprocessing waste material comprising the steps of:

locating the said waste material together with glass forming material in a current conducting melting vessel;

applying power to at least one of a plurality of induction heating coils located proximate to the said vessel to thereby heat the said glass forming material; and

subsequently pouring a molten mixture of glass and waste material from the said vessel into a storage container; wherein

during the said power applying step, at least one of the said heating coils is energised and mutual induction of current in a heating coil adjacent the said energised coil is prevented or permitted by selecting an on or off status of a switching element in power supply circuitry associated with the said a heating coil.

16. (Currently Amended) The method as claimed in claim 15 further comprising the steps of:

when two or more adjacent coils are simultaneously energised during the said power applying step, balancing the heating power delivered to respective zones associated with each adjacent coil in the said vessel.

17. (Currently Amended) A method for melting a target material comprising the steps of:

providing a current conducting melting vessel within which the said target material can be melted;

providing at least two induction heating coils at selected locations proximate to the said melting vessel;

selectively supplying power to the said coils to thereby selectively energise the said coils; and

preventing or permitting ~~the a~~ mutual induction of current in a heating coil adjacent to an energised heating coil by selecting an on or off status of a switching element in power supply circuitry associated with ~~the said~~ a heating coil.

18. (Currently Amended) The method as claimed in claim 17, further comprising ~~the steps of~~:

when two or more adjacent coils are simultaneously energised during a heating operation, balancing ~~the a~~ heating power delivered to respective zones associated with each adjacent coil, in ~~the said~~ vessel.

19. (Currently Amended) The method as claimed in claim 18, further comprising ~~the steps of~~:

during ~~the said~~ heating operation in which two or more adjacent coils are simultaneously energised, allowing the mutual induction of current in ~~the said~~ adjacent coils to occur.

20.-21. (Canceled)